

AMENDMENTS TO THE CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Currently Amended) A system circuit for processing radio frequency (RF) signals comprising:

an input to said circuit for receiving an RF signal;

a mixer having an input connected to said RF signal input;

a first filter having an input connected to an output of said mixer,

wherein said first filter is a low-pass filter;

a first amplifier having an input connected to an output of said first filter;

a second filter having an input connected to an output of said first amplifier; and

a second amplifier having an input connected to an output of said second filter, and an output connected to an output of said circuit;

wherein said mixer, said first and second filters and said first and second amplifiers are constructed on a single integrated circuit substrate.

14. (Cancelled)

15. (Previously Presented) The system as claimed in claim 13, wherein said first amplifier means is a variable gain amplifier (VGA).

16. (Original) The system as claimed in claim 13, wherein said second filter means is an intermediate frequency, band-pass filter.

17. (Previously Presented) The system as claimed in claim 13, wherein said second amplifier means is a fixed gain amplifier (FGA).

18. (Currently Amended) A method of processing radio frequency (RF) signals, the method comprising the steps of:

receiving an input RF signal;

mixing said input RF signal with an operating frequency signal to generate a first signal;

filtering said first signal to generate a second signal, wherein said filtering said first signal includes processing said first signal through a low-pass filter;

amplifying to a fixed level said second signal to generate a third signal, wherein said amplifying said second signal to generate a third signal includes amplifying said second signal by a variable gain amplifier (VGA), the limit of said VGA being the maximum level acceptable by said third signal filtering step without distortion;

filtering said third signal to generate a fourth signal; and

amplifying said fourth signal a fixed amount to generate a fifth signal;

wherein said mixing, filtering and amplifying steps are performed on a single integrated circuit substrate.

19. (Cancelled)

20. (Currently Amended) A method for processing RF signals as recited in claim ~~[[19]]~~ 18, wherein the step of filtering said third signal to generate a fourth signal includes processing said third signal through an intermediate-frequency, band-pass filter.

21. (Previously Presented) A method of processing RF signals as recited in claim 20, wherein said step of amplifying said fourth signal to generate a fifth signal includes amplifying said fourth signal by a fixed gain amplifier (FGA).

22. (New) The circuit of claim 13 wherein said first amplifier operates to amplify an output signal from said first filter to a maximum level acceptable as an input to said second filter to avoid distortion of said RF signal.

23. (New) The circuit of claim 22 wherein said RF signal is a video signal.

24. (New) The method of claim 18 wherein said amplifying to a fixed level step amplifies said second signal to a specific level that is a maximum level acceptable as an input to a filter to avoid distortion of said RF signal.

25. (New) The method of claim 24 wherein said RF signal is a video signal.

26. (New) A radio frequency (RF) signal processing circuit comprising:

- a mixer coupled to an RF signal input;

- a variable gain amplifier coupled to said mixer, wherein said variable gain amplifier amplifies IF signals received from said mixer to a particular signal level, said particular signal level corresponding to the maximum signal level that can be accepted by a filter without distorting said RF signal;

- said filter coupled to an output of said variable gain amplifier and operable to pass frequencies in a selected IF band, while simultaneously attenuating signals having frequencies outside of said IF band; and

- an amplifier coupled to an output of said filter;

wherein said mixer, said filter, and said amplifiers are physically located on a single integrated circuit substrate.

27. (New) The method of processing an RF signal comprising the steps of:

- inputting said RF signal to a mixer;

- mixing said RF signal to create an intermediate frequency (IF) signal;

- filtering said IF signal to remove high frequency signals, thereby creating a first filtered IF signal;

- amplifying said first filtered IF signal to a selected signal level, thereby generating an amplified, first filtered IF signal, said selected signal level corresponding to the maximum level acceptable as an input to a band-pass filter to avoid distortion of said signal;

- filtering said amplified, first filtered IF signal in said band-pass filter, wherein said band-pass filter attenuates signals having frequencies above and below an IF frequency band, thereby generating a second filtered IF signal; and

- amplifying said second filtered IF signal;

wherein said mixing step, said filtering steps, and said amplifying steps are conducted in circuits that are physically located on a single integrated circuit substrate.